

RATING PRIVATE NONINDUSTRIAL FOREST OWNERSHIPS  
FOR INCREASED TIMBER PRODUCTIVITY AND SUPPLY

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## SUMMARY

A review of private nonindustrial forest ownership studies indicates a number of owner factors associated with land ownership, financial situation, and attitudes and characteristics useful in a rating system for identifying the best potential customers for Cooperative Forest Management assistance or advice. Substantial increases in timber productivity could be realized by directing assistance to high-rated owners and by converting to an optimum condition those forest tracts which are farthest from optimum. The relative profitability of recommended stand treatments should also be considered. A single universally applicable rating system does not seem feasible because owner populations, forest conditions, and institutional arrangements vary between geographic areas. Abstracts from the literature review provide a framework for local development of a rating system. The effectiveness of a rating system will be determined largely by the type of owner and forest tract data available and the judgment and experience of those who develop and apply the ratings.

## INTRODUCTION

The National Association of State Foresters and the U.S. Forest Service have jointly prepared a plan for a study of the Cooperative Forest Management program. For the purpose of the study, increased timber productivity and supply will be considered a primary goal of the program. However, other values such as environmental quality, natural beauty, wildlife habitat, recreation, forage for domestic animals, and water quality and quantity will receive full consideration. The study consists of several parts. One part, which is reported on in this article, is a literature review to seek factors for rating private nonindustrial forest owner's willingness and/or ability to contribute to increased timber productivity and supply and to consider the feasibility of using these factors in a rating system on which to base priorities for CFM assistance. The purpose is similar to that of any efficient sales organization recognizing the need to identify its best potential customers.

The review was limited to publications based on research results. Most were aimed at describing or classifying the owner and his forest tract with indirect references, if any, on just what motivates him to do what he does. Other articles offering the author's personal viewpoint or analysis of the forest ownership situation, however, would be useful reading for program planners as background and to stimulate ideas. Study conclusions have invariably been based on small samples of 100-300 owners by personal interview or, in a few cases, larger mail survey samples of 1,500-2,500 respondents. The literature covers a time span of about 20 years and study areas widely dispersed throughout the eastern United States. Although the evidence is not conclusive, some factors appear generally more important for rating owners' willingness and/or ability to contribute to increased timber productivity and supply. These will be listed and discussed more fully below.

Abstracts of the literature review by selected factors related to forest owners' characteristics, attitudes, and responses with respect to recommended management practices are summarized and the publications are referenced in the appendix.

A general evaluation would be that private nonindustrial forest ownership in this country is still evolving and has not yet reached the stage of maturity found in other parts of the world, such as Scandinavia. Our people are considerably more mobile, there are frequent changes in ownership, land speculation is widely practiced, market stability is variable, there is no general tradition of growing trees as a crop on small private holdings, interest in forestry is not high, and timber is of major importance to the economy only in certain localities.

What combination of factors to use in rating forest owners will depend on the owner population under consideration (e.g. East, South, Georgia, southeast Georgia). Not all factors must or can be considered in an owner rating system. The best combination will depend on the geographic area to which it is being applied. A program planner should be thoroughly familiar with the owner population in the selected area and use as many factors as possible within the limits of time, funds, and available information.

One method for determining which forest ownerships might contribute most to timber productivity and supply would rate the owner, his tract, and treatment profitability. An initial screening of the owner population would identify those individuals most likely to practice forest management. A second screening would provide a ranking of forest tracts according to potential contribution to increased timber productivity. A final screening, if desired, would be based on relative profitability of the treatment needed to bring the forest tract to optimum growing condition.

# RATING THE FOREST OWNER

Using guidelines based on the literature review, the major factors for rating owners were selected and a rating system developed. The factors which appear most useful for rating forest owners for their timber production potential are shown below.

<u>Rating Factors</u>	<u>Opportunity Rating Range</u>
<u>A - Land ownership</u>	
1. Forest acres owned	most-----least
2. Proportion of land in forest	high-----low
3. Assessed value of all land	high-----low
<u>B - Financial situation</u>	
1. Total assets	most-----least
2. Annual income	high-----low
3. Percent of annual income available for savings or investment	high-----low
<u>C - Attitudes and characteristics</u>	
1. Current and future objectives in holding forest tract	timber production-----other
2. Interest in forestry	most-----least
3. Knowledge of forestry techniques	most-----least
4. Adoption level of latest agricultural practices	innovators-----noninnovators
5. Timber marketing experience	recent-----none
6. Education	most-----least
7. Occupation	business and professional-----other
8. Age	younger-----older
9. Future planning horizon	longest-----shortest
10. Past tenure	longest-----shortest



The opportunity rating range from good to poor potential for better forest management is only indicative, so that it may apply to any locality; a specific example will be illustrated later. Considerable difference in quantifying the factors may occur due to the geographic area in which they are to be used.

A study of the information given in the appendix will reveal a number of interrelationships among the above-listed factors. For example, individuals who are in the business-professional occupation class tend to be better educated and to have higher incomes; successful farmers are often the innovators in the community; and owners with a good knowledge of forestry techniques usually are those with much interest in forestry.

There were conflicting results among the investigators regarding age and past tenure. For example, young owners were found to have longer planning horizons and therefore more interest in forestry despite the possible delay in returns. Older owners often have sounder financial positions and are thus better able to make forestry investments. In some areas owners who have recently acquired forest tracts tend to be more financially secure than the previous owners and thus more likely to have lower alternative rates of return. But this did not always offset the positive effect of stable tenure of a family ownership. Many owners lack certainty or knowledge about future planning horizon for their forest tracts and their objectives for holding land were found subject to change over time.

Location of owner's residence with respect to his forest tract was considered and dropped from the factor list, since most studies found the majority of owners living within 50 miles of their property. In some cases (e.g., Michigan) many absentee owners living in metropolitan centers claimed to be holding their forest tract for nontimber purposes. The resident vs. absentee owner factor might be included in those areas where this shift in ownership is of growing importance.

#### RATING THE FOREST TRACT

The rating factors for ranking forest tracts according to their potential contribution to increased timber productivity are given below.

<u>Rating Factors</u>	<u>Opportunity Rating Range</u>
D - <u>Forest tract</u>	
1. Market demands	many and few and competitive----noncompetitive
2. Site productivity	high----low
3. Tract accessibility	good----poor
4. Stocking level	over- and within understocked----optimum range
5. Stand condition	poor----good

As with the owner factors, the opportunity rating range from good to poor potential for timber productivity is only indicative. The potential is good where market demands are many and competitive, site productivity high, and tract accessibility good. The factors of stocking level and stand condition are related directly to the primary goal of increased timber productivity and supply. Conversion of a forest tract from nonoptimum (i.e. poor stand condition and over- or understocked) to optimum (i.e. good stand condition and within optimum stocking range) will achieve the largest timber productivity increase. Treatment of stands already in good condition and stocked within the optimum range will produce a lesser increase. Thus, treatment priority should be given to nonoptimum stands. Treatment of optimum stands becomes of greatest concern at time of harvest. This concern should be to see that the stand is properly harvested and a new stand of desirable species established.

## RELATIVE PROFITABILITY OF TREATMENT NEEDS

The final step in a complete rating system would determine treatment profitability using a capital budgeting approach. Treatments promising the highest benefit-cost ratio should receive top priority. Guidelines for determining this ranking are to be developed in another part of the CFM study.

A question may arise as to who is going to bear the treatment investment costs. Whether it be the individual owner or industry and government with incentive programs, the most profitable treatment will have the greatest appeal. All studies have shown this to be the case with a provision that those owners who seek consumption goals (i.e., recreation, wildlife, aesthetics) rather than timber production goals demand careful harvesting, or perhaps none at all, so as to retain their forest in the desired condition.

QUANTIFYING THE RATING FACTORS FOR OWNER AND  
FOREST TRACT--AN ILLUSTRATION

How the various factors might be quantified is illustrated below for a hypothetical situation (Table 1). In actual practice only certain selected factors would be used as determined locally. The objective is to identify and rank owners and forest tracts by their potential for increasing timber productivity and supply. Limits for each opportunity rating are first set, the range subdivided into five parts, and a "5" rating given to owner or tract with high potential decreasing to a "1" rating for those with low potential. Some factors (e.g., C-2, C-3, D-1) have not been quantified and may have to be rated on some such basis as indicated. Owners and tracts with the highest total rating would be of top priority in a CFM assistance program aimed at meeting the goal of increased timber production.

Table 1.--An illustration of opportunity rating ranges  
by individual rating factors

Rating Factor	Unit	Opportunity Rating				
		5	4	3	2	1
A-1	acres	Over 1,000	501-1,000	201-500	51-200	50 or less
A-2	percent	Over 80	61-80	41-60	21-40	20 or less
A-3	dollars	Over 30,000	10,001-30,000	5,001-10,000	1,001-5,000	1,000 or less
B-1	dollars	Over 50,000	20,001-50,000	10,001-20,000	2,001-10,000	2,000 or less
B-2	dollars	Over 20,000	10,001-20,000	5,001-10,000	1,001-5,000	1,000 or less
B-3	percent	Over 55	41-55	26-40	10-25	10 or less
C-1	--	Timber production only	Timber production and some recreation	Timber production recreation equal	Recreation and some timber production	Recreation only
C-2	--	Much		Some		None
C-3	--	Much		Some		None
C-4	--	Innovator	Early adopter	Early majority	Late majority	Laggard
C-5	years	Within 1	Within 1-3	Within 4-10	Over 10	None
C-6	--	Completed College	Secondary and some college	Completed secondary	Primary & and some secondary	Completed primary
C-7	--	Business & professional	Farmer full-time	Farmer part-time	Wage earner	Other
C-8	years	30 or less	31-40	41-55	56-70	Over 70
C-9	years	Over 20	11-20	6-10	1-5	None
C-10	years	Over 20	11-20	6-10	1-5	None
D-1	--	Many and competitive		Normal		Few & non-competitive
D-2	--	High		Medium		Low
D-3	--	Good		Fair		Poor
D-4	percent of optimum	60 or less Over 140	61-70 131-140	71-80 121-130	81-90 111-120	91-110
D-5	percent crop trees <sup>1/</sup>	20 or less	21-40	41-60	61-80	Over 80

<sup>1/</sup> Basal area in poletimber and sawtimber stands; number in seedling and sapling stands.

## APPLICATION OF RATING SYSTEM TO A SPECIFIC AREA

Any combination of the above rating factors might be used to arrive at a priority ranking. Assume that the list has been reviewed in a particular State, certain key factors have been selected (i.e., A-1, B-2, C-4, and C-7) as most appropriate in the geographic area, and opportunity rating ranges shown above fit the conditions. The required information is obtained as shown in the illustration below for three sample owners representing all owners.

<u>Rating factor</u>	<u>Owner #1</u>	<u>Owner #2</u>	<u>Owner #3</u>
A-1 Forest acres owned	600 (4) <sup>1/</sup>	30 (1)	100 (2)
B-2 Annual income	25,000 (5)	4,000 (2)	10,000 (3)
C-4 Adoption level of latest agricultural practices	innovator (5)	late majority (2)	early adaptor (4)
C-7 Occupation	farmer full-time (4)	wage earner (2)	business and profession (5)

<sup>1/</sup> Numerical rating in parentheses

The total ratings by owner would be: #1-18, #2-7, and #3-14. Owner #1, and all similar, would be considered the highest priority group as to willingness and/or ability to contribute to increased timber productivity and supply. Best results from an assistance program would be realized by contacting this owner group first, followed by the #3 group and with lowest priority given to the #2 group.

The second group screening of owners would be of their forest tracts. Because of the difficulty and cost of getting stand information, some may choose to forego this step. However, assume that all factors are selected for rating except tract accessibility since most tracts in the area are considered reasonably accessible. Results from three sample tracts representative of all tracts are illustrated below.

<u>Rating factor</u>	<u>Tract #1</u>	<u>Tract #2</u>	<u>Tract #3</u>
D-1 Market demands	many (5) <sup>1/</sup>	normal (3)	few (1)
D-2 Site productivity	medium to high (4)	medium (3)	medium to low (2)
D-4 Stocking level	150 (5)	65 (4)	75 (3)
D-5 Stand condition	50 (3)	25 (4)	15 (5)

<sup>1/</sup> Numerical rating in parentheses

The total ratings by forest tract would be: #1-17, #2-14, and #3-11.

All tracts are grouped into high, medium, and low opportunity classes for increasing timber production. The high opportunity tracts of the high priority owner group would rank at the top of the contact list in the assistance program. A final screening, if desired, would be the refinement of ranking by relative profitability of the treatment needs.

There is general agreement that the private nonindustrial forest ownership problem is complex and that it will play a significant role in future timber supply. Research has provided many answers and will continue to do so but not sufficiently for complete solutions. Meanwhile it is necessary to move along and take action as best we know on the basis of what evidence we have at hand. Limited resources can be more effectively used for increasing timber productivity if they are directed to the high-priority ownership group. A rating system will identify this group. Its feasibility will rest largely on the amount and quality of available data but to even a greater extent on the judgment and experience of those involved in its development and application.



APPENDIX I - ABSTRACT OF RESEARCH RESULTS

1--MAJOR OCCUPATION

- Ark.  
1959. Investments in forestry made by greater proportion of business and professional people than any other owner group; farmers, long considered to be in the best position to practice forestry, do not show up well; about 10% of all owners interviewed could be classed as active forest managers; in the better farming areas, the need for increased acreage and for equipment, seed, fertilizer, and other working capital probably takes most, if not all, of the funds available for investment; of all owners with pine plantations 50% were business-professional, 26% farmer, 16% wage earner-clerical, 8% others.
- La.  
1959. Local wage earners had greatest proportion of forest managers and retired farmers the least; no statistical significance shown for other occupational groups probably due to small sample; farmers generally lacked interest in forest management and regardless of economic condition judged their present land use far superior to that of including timber growing as an alternative.
- La.  
1963. Adopters of forest practices were more likely to be full-time farmers; largest percentage of low adopters was found among persons working as farm laborers and persons who had retired from farm or nonfarm occupations.
- La.  
1965. Farming definitely associated with adoption of recommended practices; 63% of the high adopters said their occupation was "principally farming".
- Miss.  
1961. Y-LT Project. Business and professional owners responded best to the project.

N.C.

1963. Deliberate forest practices instituted by 48% of professional group, 22% of undivided estates, 21% of retired persons, 16% of housewives and widows, and 18% of wage earners; average size of forestry property held by professional and businessmen 110 acres, which was about four times that of wage earners, and twice that of housewives, widows or retired persons.

N.C.

1964. The sizeable portion of nonindustrial forest land in the status of an undivided estate (12%) and to a lesser extent that held by housewives or widows, and retired people (14%) constitutes a forest problem; these situations generally characterized by an inactive management policy due to legal uncertainties of ownership or to the physical and mental inability of the owner to carry out an active program; ratio of total area to forest area held by given ownership showed little variation among classes; proportions of owners, by occupation classes, who have initiated at least one deliberate forest practice during their tenure of ownership were: professional-48%, business-27%, farmer-25%, wage earner-18%, housewife or widow-16%; poor performance of wage earners probably due to fact that their primary interest in their property is as residence and high-ranking of professional must be considered largely due to their investment outlook toward ownership.

N.C.

1965. Significant difference by occupation between participants and nonparticipants in CFM, ACP, and SCD but none in Forestry Extension programs; business and professional owners most responsive and wage earners, housewives and widows least responsive in CFM, ACP, and SCD; farmer-participants about equal to nonparticipants in CFM and ACP, and farmers very responsive in SCD; although For. Ext. participation not related to occupation, farmers expressed more interest than any other occupational class.

N.C.

1968. Of all owners who planted wage earners scored 100% and other major occupations scored about 70%; of all who thinned wage earners scored 8%, business or professional 20%, farmer 43%, and housewives, widows, and retired nonfarmers scored 82%.

TVA

1956. Owners in farming or industrial, investment, professional had better management record (77%) than did trades and labor, housekeeping, merchandising, commercial (55%).

TVA

1969. In 1953 over 50% of landowners were farmers and today they represent 22%, 32% are trades and labor workers, 5% professional

Texas

1953. Owners in non-farm business or profession or retired from such occupations generally held larger, more productive forested acreages and they resided in town away from their land.

Texas

1960. Few farmers manage holdings for timber production; many farmers, especially those with larger holdings, have secondary objective of timber management with the primary one being the use of timbered acreage for grazing; major group with primary objective of growing timber is business or professional men who usually reside in towns or cities; laborer group next in importance.

Texas

1967. When comparing new owners with previous owners of specific tracts: majority of new owners were business and professional who had acquired woodlands for purposes other than wood production; their motives for ownership often not clear; 77% of new owners were business and professional compared to 34% of previous; occupational groups other than business and professional more likely to make timber available.

Mass.

1965. Owners classed as "preservationist" compared to other owners, contains fewer farmers and laborers and correspondingly more professionals, executives, and businessmen.

So. Mich.

1962. Full-time farmers and business-professional had a more adequate concept of forest management than did other occupations; about half of business-professional who harvested timber had a good cutting rating, while all of the wage earners' land was cut in a poor manner.

Mich. UP

1962. Farmer, business-professional, and logger classes showed the most activity in performance of forestry practices, while the local recreation group, undivided estate, housewife-widow, and absentee classes showed little.

- Mich.  
1964. Owners show variety of occupational backgrounds, with no single grouping comprising a majority; farmers and business-professional account for largest amount of forest area--19% each, with wage-earner and housewife-widow next--11% each; recreational groups own large areas in northern half of Lower Peninsula.
- Mich. UP  
1969. Minor changes among occupation groups between 1960 and 1967; business and professional owners more numerous in 1967 but controlled same proportion of area; trend toward more employment in business and professions, less in farming, and the expanding recreation and leisure time activities are changing the complexion and outlook of forest owners.
- Missouri  
1964. 59% of all owners interested in management-lease service were business and professional class; farmers and non-resident owners were most interested in growing timber.
- New Hamp.  
1964. Comparing innovators with noninnovators of new forest management practices, 67% of business and professional were innovators, 40% of full-time farmers, and no strong tendency for either among wage earners and retired.
- N.Y.  
1959. The proportion of tree-planting landowners who used SCD planting service was essentially the same for farmers as for nonfarmers.
- Pa.  
1969. Compared with nonfarmers, farmers more interested in timber products for sale or own use, to have been self-motivated to cut trees, more likely to be willing to harvest timber from their woodland, to do logging and hauling themselves, to restrict harvesting to a certain time of the year, and to be more familiar with public assistance sources; nonfarmers tend to be more interested in woodland for nontimber purposes, more likely to sell standing timber to a contract logger.
- Wis.  
1959. About 60% of farmers use woodland for timber growing contrasted to 40% among all other occupational groups.

New Eng.

1950.

About 45% of the "farm woodland" acreage in units of 10 acres or more is in farms that are now being operated on a full-time basis--the other 55% is apparently in farms that contain less than 10 acres of woodland or in farms whose owners look to some other occupation as their chief source of income; points to the need for reconsidering that forest area that has been classified as "farm woodlands"

East

1961.

Although farmers were more numerous than other occupational classes, there was not always a clear-cut majority and a considerable number of owners classified themselves as business-professional or wage earner-clerical.

## 2--SIZE OF FOREST LAND OWNERSHIP

Ark.-La.-Miss.

1945.

Does not appear to have significant relationship to forest practice on the land.

Ark.

1959.

Holdings of owners classed as managers average 228 forested acres in contrast with 46 acres for non-managers.

✓ Ga.-N.C.

1960.

Of owners who practice forestry 80% in 500-5,000 acre class, 60% in 100-500 class, 40% in 30-100 class, and 20% in 3-30 class.

La.

1959.

Managers had pine tracts double size of non-managers (125 vs. 66 acres).

✓ La.

1963.

Adopters of forest practices more likely to have larger holdings; positive correlation between a high adoption score and the sizes of both total holdings and woodland holdings.

✓ La.

1965.

Owners with larger acreages were more likely to have high adoption rates of forestry practices; 14% of high adopters and 65% of low adopters were on holdings of less than 50 acres; 59% of high adopters and 16% of low adopters owned more than 100 acres.

N.C.

✓ 1963. Properties of those owners who had instituted deliberate forest practices averaged more than twice the size of all other nonindustrial holdings; forest properties held for purposes of growing and selling timber stumpage more than twice as large as those retained by owners for general farm use.

N.C.

✓ 1964. Over half the ownerships of 450 acres or more given rudimentary care by their owners compared to about 20% on ownerships under 50 acres; ownerships on which a deliberate forest practice had been applied averaged 163 acres compared to 47 acres on those where forestry was never practiced; there is no forest ownership size bias associated with the different categories of recreational use and user; the feasibility of collecting recreation charges increases with size of holding; larger average size tract held by those claiming specific timber growing use as ownership objective; remarkable correlation between size of forest tract and reasons owners expressed for making timber sales; silvicultural reasons for selling timber were much more prevalent among owners of large tracts than among owners of small tracts; forced liquidation sales most common among owners of small tracts while factor of price uncertainty most serious among intermediate sizes; average-size tract of owners with very low comprehension of forestry was 42 acres compared to 553 acres of those with very high comprehension; tendency for the pride of ownership displayed by owners to increase directly with size of forest property; owners aware of possibilities of cost-sharing payments of ACP held tracts which were, on the average, larger than those held by uninformed owners; holders of large forest properties better informed individuals in every respect than their small-property counterparts and, as a consequence, are more prone to act wisely and take advantage of technical and economic opportunities.

N.C.

✓ 1965. Has significant relationship with participation in CFM, ACP, SCD, and For. Ext. programs; participation low among owners of small properties and increases with size of forest tract; a probable correlation with occupation and education; For. Ext. participation represents only an interest and not a willingness to undertake forestry investments.

N.C.

1966. Present condition of forest land, as measured by area condition classification or percentage of stocking with desirable trees, was not found to be influenced by either size or type of ownership; total acreage contained in a property influenced the proportion devoted to forest, and this relationship differed somewhat between farm and non-farm groups; the average size of farm ownerships was

considerably larger than the average for nonfarm ownerships, but a greater proportion of the latter were devoted to forest use.

N.C.

1968.

Planting and thinning by owners positively related to size of forest ownership

<u>Acres</u>	<u>Percent who planted</u>	<u>Percent who thinned</u>
10-50	67	28
50-150	72	46
150-500	82	48

TVA

1956.

Below 500 acres there was little difference by size of ownership in level of management; those above 500 acres all had satisfactory management.

TVA

1969.

Larger ownerships were the best managed; the quality increased almost in direct proportion to the amount of acreage up to 5,000; forests in the 100-500 class seem to offer the greatest opportunity for development.

Texas

1953.

The more productive ownerships found to be relatively large in average size; the proportion of ownerships rating very poor in management was progressively greater in smaller size classes and included about one-half of tracts 3-20 acres; it is likely that larger forested acreages attract more management attention from owners because of the greater potential returns from given effort; is probable that stronger capital position, ability to make investments for future income, and less need to liquidate for immediate income are factors more frequently associated with large ownerships.

Texas

1956.

Owners who undertook timber management had total landholdings six times the average ownership.

Texas

1960.

Poor productivity rating associated with smaller tracts; 80% of 3-20 acres, 53% of 21-320, and 42% of over 320 acres. Owners with small acreages in timber have little desire or incentive to manage this timber as an enterprise; small acreages in timber do not lend themselves to profitable management, and it is only when the timber resource becomes fairly important that owners have an objective of growing timber as a management part of their activity; among owners with less than 160 acres in timber, only 3-15% intend to manage for timber production; in contrast, 41% of owners with 641 acres or more in woodland intend to manage for timber.

Texas

1967.

Comparing present and previous owners: in both cases those who intended to produce timber for commercial use ordinarily had larger woodland acreage than those who did not intend to do so; regardless of tract size, a lower proportion of present owners made timber available for sale than did previous owners; most of the new owners acquired tracts which were formerly part of larger blocks resulting in fragmentation of the woodlands.

Ind.

1966.

On managed woodlands as tract size increased dollar returns per acre decreased while internal rate of return increased.

Mass.

1965.

Owners with large tracts more likely to make timber sales than owners of small tracts; owners of smaller tracts (3-9 acres) are younger on the average with fewer years of formal education and smaller gross incomes than owners of large properties; owners of 250 acres or more have the highest average age, and levels of education and income; appear to be no important differences among ownership classes between these extremes; plainly evident that size of ownership and involvement in forest management activities are closely related; concerning reasons for not selling forest products in the past, disinterest and insufficiency of merchantable material are more strongly evident among smaller ownerships, while fear of forest destruction becomes more significant with owners of larger properties; size of acreage appears much less relevant with respect to use of forest for recreation.

Mich.

1958.

Large landholders are better informed and make greater use of the service forestry program than small owners.

Mich. UP

1962.

It seems probable that the future will see more rather than less fragmentation of holdings; prices now being paid for tracts for recreational purposes frequently make it more attractive for holders of larger tracts to dispose of their lands 40 by 40, rather than to attempt to sell them as a block.

Mich. UP

1969.

Average size ownership increased from 90 acres in 1960 to 133 acres in 1967.

Missouri

1964.

The larger the tract the more appealing to the owner was the idea of managing his timber.



New Hamp.  
1964.

Comparing innovators and noninnovators of new forest management practices, there appears to be no significant difference in woodland acreage between the two groups.

C ✓  
N.Y.  
1959.

Forest acreage owned by individual forestry-practice adopters averaged considerably greater than that owned by individual non-adopters.

Ohio  
1961.

Owners with small tracts were as much inclined to grow timber as were owners of large tracts.

✓  
S.E. Ohio  
1965.

Significant positive relationship between adoption of management practices and acres of woodland owned and woodland income; little difference in woodland size owned by ACP participators and nonparticipators; owners of larger farming units also had larger annual incomes and were more inclined to use the available technical forestry assistance.

Pa.  
1969.

Larger landowners more interested in holding their land as an investment for future sale, more likely to have cut timber and obtained professional assistance, and to be more interested in woodland management; small owners more interested in their land for immediate economic returns and use nonprofessional sources for assistance; smaller owners can get assistance but evidently lack knowledge and motivation; is less interested in scientific management because of smaller financial returns.

Wis.  
1959.

87% had forest holdings less than 100 acres; owners with forest of 100 acres or more consider timber growing the intent of use more often than do those having less than 100 acres; those who owned more than 50 acres were more inclined to plant trees.

New Eng.  
1950.

Owners of larger properties tend much more strongly to consider timber values as reason for ownership; no correlation by tract size for other reasons given (i.e. recreational purposes, satisfaction of owning land, speculation, pasture use); negative correlation for residential use; 35% of forest land held by 7% of owners holding less than 5,000 acres; a systematic effort to locate and assist this small number of owners would go a long way toward getting better forestry on a large block of the land.

East

1961. Owners holding less than 100 acres of forest comprised almost 85% of the total and controlled about 45% of all forest acres; contacting these individual owners to convince and assist them to increase timber yields on their properties a formidable task because of their large numbers; owners with 100-500 acres were about 15% of total with about 35% of total acreage; efforts expended in developing going forestry businesses may be more promising here than with the very small owners; a steady increase in ratio of forest land to total land ownership with increasing forest ownership size class; 25% in size class under 30 acres; 45% in 30-99 acre class, 60% in 100-499 acre class, and 90% or more in class over 500 acres.

East

1965. Comparing innovators of agricultural practices with non-innovators (both groups woodland owners) the former had woodland acreage which was only slightly larger.

### 3--ASSET POSITION

La.

1959. It appeared to the interviewers that owners who were making a start in forestry had generally more financial resources than the non-managers.

La.

1963. Adopters of forest practices were more likely to have a high socioeconomic level.

La.

1965. Apparent tendency for persons who derived a high percentage of their income from their farm property to be high adopters of forestry practices; persons deriving most of their income from outside sources tended to be low adopters; speculation that those dependent on farm income have more incentive to use efficient practices.

High adopters tended to have a high socioeconomic rank (based on level of living, income, and personal observation of home, yard, and surroundings in general); low adopters generally had low rank.

Miss.

1961. Y-LT Project. In general, owners with greatest assets and incomes have been the most likely to invest in timber growing; forest investment also varied with owner's age, sex, race, and residence, but the differences were fundamentally related to level of assets; acreage held is related to assets.

- N.C. 1963. A large number of properties in small size classes and are held by persons with low incomes or with limited managerial capabilities; 72% of forest holdings under 50 acres.
- N.C. 1964. Among owners who sought, obtained, and followed timber-marking advice, 30% had more than 10% of their income committed to fixed expenses and 7% had committed more than 20%; on the other hand, among owners who sold timber without seeking advice, 62% had more than 10% of their income committed to fixed expenses while 20% had committed more than 20%; total owner income and income structure play very significant roles in guiding the timber sales policies followed by individual owners.
- N.C. 1965. Participation in programs involving conservative cutting methods and investments in forest practices appears to be related to one common factor--the asset position of the landowner; this conclusion is valid if the owner's occupation, education and size of his forest property together are acceptable as indicators of his asset position; however, it was not possible to demonstrate this point statistically in this study.
- N.C. 1968. Among all owners who had adopted a forest practice those with holdings of \$20,000 or less--53% of all respondents--planted more frequently than did owners with more valuable holdings; for thinning, the relationship was reversed; owners with less than \$5,000 annual income, 69% planted and 45% thinned; those with more than \$5,000 annual income, 73% planted and 25% thinned.
- TVA 1956. Successful business managers were also good woodland managers; eight of ten owners whose general business efficiency rated "good" provided satisfactory management; the ratio was below 50% for those whose general business efficiency rated "poor"; three times as many successes as failures among those whose economic status had improved; where economic status remained unchanged, there were less than twice as many; unmortgaged woods were better managed than those under mortgage; reasons for unsatisfactory management, expressed by the owner, were most often tied in with financial difficulties; but reasons for satisfactory management also tied into economics; successful managers saw a better income and more timber for future use through management.

Texas

1953. Most frequently expressed obstacles to timber management were those of economic nature; these limitations expressed by 44% of owners as their major obstacles and as secondary obstacles by numerous others; specific economic and financial obstacles expressed included long-term nature of timber production; infrequent returns, the long period before the first income from improvement practices, more profitable return to owner's time in other endeavors, lack of funds, immediate need for income and lack of profit in timber production.

Texas

1956. Landowners who undertook timber management were those who derived substantial income for sources other than their woodlands and therefore were not pressed to cut immature growing stock.

Texas

1967. Comparing present owners with previous owners: 64% of present and 35% of previous had income level of \$10,000 or more; however, of these only 32% of present but 55% of previous made timber available for sale; for many in higher income range, forest land was an input investment to be recovered later as capital gains so current income from sale of products not desirable.

Mass.

1965. Owners classed as "preservationist" compared to other owners receive a moderately larger average income with better representation in the middle income class especially and in the higher brackets to a lesser extent.

N.Y.

1959. Using total equalized value of property held as a measure, assets of forestry-practice adopters averaged considerably more than assets of non-adopters.

S.E. Ohio

1965. Positive relationship between gross annual income of owner and the adoption of management practices; significant differences between owners with incomes over \$10,000 a year and those under \$10,000 in adoption of specific management practices; however, it can be strongly argued that income does not accurately measure the owner's asset level or net worth and therefore does not portray his ability to make capital investments.

When owners are classed into those who have received an annual income from their woodland of less than and more than \$2 per acre, significant differences in attitude toward specific management practices is apparent; the latter group evidenced more interest and participation.

Wis.

1959. Forest land of nearly 75% of owners was valued at less than \$40 per acre; no association was apparent when value was compared to owner characteristics such as age, tenure, and method purchase; conclusion that low values and general lack of forestry in this area should be made with caution, since it is possible that factors other than value are more important.

Lake States

1961. In many areas, including the Lake States, farmer-owners of forest tracts are being outnumbered by nonfarmers (business, professional, wage earners, housewife-widows, retired); while prospect of periodically receiving several hundred dollars of additional income from the sale of timber may strike marginal farmer as being attractive, it may provide a much smaller appeal to a busy doctor, lawyer, or other nonfarmer owner with a comfortable income source; while the resident farmer may have had both the desire and time to do offseason woods work, the nonfarmer may not; a more favorable personal financial position might permit some nonfarmer owners to make investments in their woodlands in the form of hired labor or other purchased inputs; the pressure on small woodlands because of an owner's chronic or emergency need for funds has been cited as the crux of the small woodland ownership problem and one of the main reasons why such holdings often are prematurely and destructively logged; ownership shifting from marginal farmers to financially stable owners might reduce this problem.

#### 4--TYPE OF OWNER

Ark.-La.-Miss.

1945. 84 percent individual, 14 percent joint, 2 percent corporate; stand condition best on latter; no difference on other two.

Ark.

1959. 67% of tracts held by individuals, 15% by partnerships, 5% by estates; heirs of estates often unable to agree on a definite course of property management.

N.C.

1964. Legal status of ownerships 82% individual; about 95% of all ownerships acquired by purchase and inheritance.

Texas

1953. No real difference between estates and non-estates in quality of management practiced.

Texas

1960. 65% of small landowners associated with farming and 20% retired persons; therefore majority individual owners; 70% over 50 years of age.

Mich. UP

1962. Individual ownerships comprise 87% of total and 75% of total forest area acquired by purchase and 20% by inheritance.

Mich. UP

1969. Individual owners and partnerships account for 90% of both ownerships and acreage.

N.Y.

1959. No significant difference between forestry-practice adopters and non-adopters by method by which forest property was acquired.

New Eng.

1950. Ownership acquired by purchase--74%, by inheritance or gift--25%.

East

1961. Nine out of ten owners indicated that legal ownership was held by an individual.

5--RESIDENCE

Ark.-La.-Miss.

1945. Different types of residence (resident, adjacent, absentee) had no appreciable effect on pine productivity; 87% of total owners lived on forest or adjacent to it and 13% were absentee.

Ark.

1959. 44% of owners reside on their tracts; 70% live within 25 miles; because distance is usually considered a handicap in forest management, it is of interest to note that owners residing more than 75 miles from their tracts have less than 10% of total forest land.

N.C.

1964. Few owners involving very little forest land live great distances from their property; less than 6% of the forest and about 4% of the owners involve distance classes of more than 25 miles; owners of small properties (1-9 acres) are more than twice as likely to be resident owners as those who have forest holdings over 450 acres; likewise, there is about twice the proportion of aggregate forest area held by nonresident owners in the large size classes as in the small;

owners in residence control about three-fifths of ownerships but less than half of total forest area; nonresident owners control 20% of ownerships and 29% of forest area; average tracts controlled by owner in residence 75 acres or about half that of nonresident owners.

N.C.

1965. Location of owner residence had no significant relationship with participation in CFM, ACP, SCD, or For. Ext. programs; almost all owners resided within 25 miles of forest property; about 90% within 10 miles.

TVA

1956. Absentee owners, as a group, managed their property about as well as resident owners; absentee owners without a responsible resident manager were only 53% successful as compared with 93% of those with such a manager.

Texas

1953. No significant difference in quality of management practices due to rural or urban residence, distance of owner's residence from his main headquarters tract, or between residents and nonresidents.

Texas

1960. Only 12% of rural residents had timber production as major management objective compared to 28% of urban residents; most rural residents have major objective of using timberland for range, with forestry recognized but as a secondary objective.

Mass.

1965. 81% of owners live within 30 miles of forest tract; 61% on or within one mile; a somewhat greater percentage of owners with 1-9 acres live on the land than for other sizes of ownership, but differences are minor; owners classes as "preservationist" compared to other owners, own substantially more summer homes and fewer farms.

Mich.

1958. Absentee owners are better informed than resident owners about the aids available to them and make fuller use of these aids; owners of nearly half the forest land held by absentees had made use of forestry extension aid in contrast to 16% of resident owners; over 50% of absentees had made use of assistance offered by service foresters.

So. Mich.  
1962.

Most of those holding woodlands in urban fringe areas said objective of ownership was "inactive" (42%), while majority of those outside these areas gave forest products as objective (50-70%); logging activity was less frequent in the urban fringe (19%) than elsewhere (33%).

Mich. UP  
1962.

Over 50% of owners do not reside on their properties, but 75% have permanent residence within 50 miles with balance considered absentee; absentee owners as a group did not rank much lower than UP owners in their awareness that forestry aid was available and in their use of such aid; on a percentage basis, the number of owners attempting to sell their properties was twice as great among absentees as among UP owners; none of the ownership group who make their permanent homes outside the UP had sold timber from their lands.

Mich.  
1964.

Bulk of ownerships held by people who don't live on them; owners residing more than 100 miles away account for 25% of area; promotion of forestry assistance programs among absentees will probably require a different approach from that used for residents; of owners living in UP, 53% had harvested timber compared with 11% of the absentees.

Mich. UP  
1969.

From 1960 to 1967 nonresident proportion increased from 19% to 24% of all owners and acreage control from 12% to 18%; in 1960 the properties of residents nearly twice as large as those of nonresidents, but in 1967 only 50% larger; one-third of resident owners had sold stumpage or cut products compared to only 14% of nonresidents; 21% of residents planted versus 9% of nonresidents; 12% of residents did TSI vs. 4% of nonresidents; 12% of residents carried out other misc. practices vs. 8% of nonresidents; if the share of forest land controlled by nonresidents continues to increase withholding of timber could materially reduce timber sources for industry.

New Hamp.  
1964.

Comparing innovators and noninnovators of new forest management practices, distance from residence to woodlot appears to have little significance with either group.

N.Y.  
1959.

No significant difference between forestry-practice adopters and non-adopters by distance of forest property from owner's residence.



- Ohio  
1961. 80% of owners live within 10 miles of their forest land; the farther an owner lived from his land the less attention he paid to it.
- Pa.  
1969. 81% of owners live within 20 miles of forest property; out-of-county owners more likely to be interested in the woods for nonmaterial values, to have cut timber to practice better forest management whereas in-county owners were more interested in woods for economic values, to have cut timber to clear the land or to remove mature trees; owners who do not reside on the property more likely to have larger woodland holdings; nonresidents more interested in woodland management than residents of county.
- W. Va.  
1966. 60% of trees planted by rural residents, 20% by absentees, 10% by farmers.
- Wis.  
1959. 64% live on tract containing their woodland; 89% live within 10 miles; distance of residence from the woodland has little influence on intentions to grow timber; absentee owners were not eager to have their forest land managed for them.
- East  
1961. At least two-thirds of owners had residence within 25 miles of their forests and in most areas 90% or more lived within this distance; 50-75% lived on their forest property.
- East  
1965. Comparing innovators of agricultural practices with non-innovators (both groups woodland owners), no difference in distance of residence from tract.

#### 6--EDUCATION

- Ia.  
1959. Owners who had attended colleges were managing significantly more often than those with grammar school education.
- Ia.  
1963. Adopters of forestry practices better educated; through the class of "high school graduate" there was a definite tendency for high adoption to increase with increases in formal educational attainment; most low adopters found in category of those with fewer than six years formal training.

- La.  
1965. 15% of high adopters of recommended forestry practices had less than 10 years of schooling contrasted to 43% of low adopters; 27% of high adopters had attended college, but only 14% of low adopters.
- N.C.  
1963. Owners with greater than average formal education held larger properties; average education for all owners about nine years; most owners of larger forest properties had attended college for at least a short while.
- N.C.  
1964. Direct relationship between educational achievement of owner and size of forest property; probably explainable by fact that income, and hence means for acquiring and owning property, also directly related to educational level; owner's understanding of forestry increases with increases in his formal educational achievements; no other attribute of the forest owners proved to be as closely related to their forestry comprehension as education.
- N.C.  
1965. Level of education had a significant relationship with participation in CFM, ACP, and SCD programs but not with For. Ext.; better-educated owners practiced more forestry; may be correlation with occupation and asset position.
- TVA  
1969. Quality of management increases with level of owner education and owners are better educated than ever before.
- Texas  
1967. Comparing present with previous owners: 70% of present and 40% of previous had some training above high school level; assumed that the majority of present owners having more education could better evaluate alternatives for use of their capital resources; many recognized timber as a monetary means, often liquidating it for use in other alternatives.
- Ind.  
1966. On managed woodlands as level of education of owner increased dollar returns per acre decreased while internal rate of return increased.
- Mass.  
1965. Owners classed as "preservationist" compared to others are somewhat better educated.
- New Hamp.  
1964. Comparing innovators with noninnovators of new forest management practices, the former had more formal education.

- S.E. Ohio  
1965. Significant relationship between education level of owner and the adoption of cost-sharing management practices; implication is that the better-educated cope more readily with the relative complexity involved in understanding and applying for cost-sharing practices; owners with higher educational levels also had higher levels of income.
- East  
1965. Innovators and early adopters of agricultural practices compared to noninnovator woodland owners had more formal education.

7--TENURE

- Ark.-Ia.-Miss.  
1945. Very little correlation between length of ownership and pine productivity on the forest tracts.
- Ia.  
1959. Half of the owners who had acquired their tracts since 1951 were practicing forestry--in contrast to 21% of those with longer tenure.
- Miss.  
1961. Y-IT Project. Most owners considered their tract a place to live, and virtually all of them planned to retain their holding for at least the next 10 years; seemingly stable tenure implied by responses is dubious in view of the well-developed trend toward fewer and larger farms (about 3 out of 10 tracts changed hands within the last 10 years and about half of the owners are in their 60's or above).
- N.C.  
1963. Average length of tenure 22 years and mean age 55 years; owners of larger properties older than those with smaller holdings; length of tenure for forests larger than 450 acres averaged nearly 10 years longer than for forests under 10 acres; about two-thirds of all owners expressed an intent to provide some degree of forest management stability for their properties after their deaths (i.e. create family estates).

N.C.

1964. Length of tenure varies significantly and directly with size of forest holding; owners of over 450 acres have had a portion of their present holdings an average of 27 years while those with less than 10 acres averaged about 10 years less; differences probably related to time it takes an owner to acquire a holding and also partially due to fact that there is a more active market for smaller properties; average length of tenure varies considerably with occupation class of owner; wage earner, business and professional much less than farmer; over half of all owner-ships have been in possession of the family prior to current owner's generation through either inheritance or purchase from other members of the family.

N.C.

1965. Tenure status of property manager had no significant relationship with participation in CFM, ACP, SCD, or For. Ext. programs; under ACP there was some indication that neither share nor cash tenants likely to use program.

Mass.

1965. Forest management influenced to considerable degree by stability of ownership; 80% of owners have acquired property in the past 25 years and average period since acquisition about 15 years.

TVA

1956. 80% of the woodlands still in the hands of original owners were being managed satisfactorily; management was satisfactory on only 34% of those that had changed hands; people who held the land less than 10 years showed less apparent interest in forestry than more permanent owners; those who retained ownership for 20 years or more did the best job.

TVA

1969. 41% of private forest in same ownership 20 years or more; 32% has changed hands in the last 10 years; despite the still rapid turnover in some ownerships, the trend is toward longer tenure--a trend which promises greater future success in efforts to encourage the use of professional forest management practices.

Texas

1953. Relatively more of the owners who acquired their land recently are practicing timber management; owners who acquired land recently are concentrated by occupation in business or profession, or part-time nonfarm business.

So. Mich.  
1962.

May be a limited planning horizon where owners are older and timber rotation long, especially if established stand not present; rapid turnover in ownership a problem since new owner's plans usually do not coincide with those of former owner; most owners sell timber products only once during their tenure; on an annual basis, the average return to individual owners is very small; owners whose woodlands had been in their immediate family two or more generations had more adequate concept of forest management than did the rest of the owners.

Mich. UP  
1962.

More than 70% of the total land had been acquired during the past 20 years; 60% of the individual owners believed that they would retain their properties during the rest of their lifetime; average age 56.

Mich.  
1964.

Planning horizons for most owners quite short when they purchased or otherwise assumed control of forest land; 67% of area has been held by the present owners 20 years or less; assuming that average owner will relinquish his property at age 65, the most distant planning horizon for the average new owner is 25 years; if he possessed only poorly stocked or nonstocked land, forest investment opportunities would probably have little appeal; 60% of all owners acquired their property from someone outside of their immediate family; new owner's plans probably would not coincide with those of previous owner.

Mich. UP  
1969.

46% of 1967 owners did not own the property in 1960; properties that changed hands include 29% of the acreage; annual turnover of owners between 1960 and 1967 averaged about 7%; relatively short tenure and continual state of flux in forest land ownership disrupts conclusions based on stated owner intent; these changes affect the attainment of goals related to forest properties; impede systematic and economical marketing of timber products and complicate educational and technical assistance programs.

New Hamp.  
1964.

Comparing innovators and noninnovators of new forest management practices, tenure of ownership appears to have little significance with either group.

Ohio  
1961.

50% of owners had held land from 10 to 24 years; average tenure was 17 years; tenure had little effect on owners' inclination to manage woodland for timber production; new owners were as much inclined to practice forestry as owners of longer tenure.

- S.E. Ohio  
1965. Ample evidence to indicate that continuity of ownership or land tenure is not an obstacle to attaining good forest management on woodlands; both ACP participants and nonparticipants exhibited like tendencies toward tenure of ownership, the majority having held land for 10 years or more and indicated interest in continued ownership.
- Pa.  
1969. Half the owners have owned their property less than 20 years.
- Wis.  
1959. 79% held tract less than 25 years, 36% less than 10 years; all tenure classes were equally active in selling timber in the past 4 years; tenure has a distinct relation with home use; of those with more than 25 years tenure, 78% make use of woodlot for home-use products; percentage declines as length of tenure decreases until 48% of those with less than 5 years utilize home-use products; length of tenure directly related to disinterest in forestry; percentage disinterested increases from 18% of those with less than 5 years to 40% of those with 25 years or more.
- New Eng.  
1950. More than half of total forest acreage owned by persons who have been holding such property for less than 20 years; a fundamental problem is that changes in ownership often bring with them strong temptations to liquidate the timber values.
- East  
1961. The number of years forest land has remained in present ownerships varied over a wide range; about a third had held land less than 10 years, a third from 10 to 20 years, and a third for more than 20 years.

#### 8--OBJECTIVES OF OWNERSHIP

- Ark.-La.-Miss.  
1945. Primary purpose in holding forest land appears to have some relation to land productivity; farm owners interested in timber growing in conjunction with farming highest rating; those owners holding land for the existing timber lowest.
- Ark.  
1959. 65% of owners claimed to be primarily interested in growing timber on their tracts; this signifies more promise than substance; 90% of the active timber managers say they intend to grow timber, though so do 71% of the nonmanagers.

E. Ky.

1960.

Owner's attitudes are related to his personal circumstances and environment and because of this his objectives for his forest land often differ from optimum forestry objectives; most important obstacles to forestry found to be low incomes and poor education; 75% have incomes less than \$2,000 a year; living conditions and facilities well below modern standards; considerable illiteracy among adults--median schooling among adults 25 years and older is 7th grade; although 1 in 3 thought that it would be profitable to practice forestry on their woodland, 3 out of 4 had never attempted to do so; 8 out of 10 woodland owners favored "letting the timber grow."

La.

1963.

Owners engaged in "mixed farming" (row crops, livestock, hay, and truck garden) included the greater percentage of high adopters of forest practices; highest percentage of low adopters found among nonfarming woodland owners.

N.C.

1963.

One-third claimed to have some timber-growing objective in mind; one-third held partly forested land for general farming objectives.

N.C.

1964.

40% of owners anticipated property will go to direct descendants or heir who will continue present management policies; 31% had no present plans; 75% of owners reported that they still harvested some quantity of timber for their own use; fuelwood and lumber in that order by far most popular individual products produced; as many owners (35%) had some timber growing objective in mind as were interested in general farming activities including an occasional timber sale; few owners would admit to holding their forest lands primarily for speculative values; pride of ownership of much importance and is often entirely disassociated with income of owner or returns he may receive from forest.

N.C.

1966.

Before we can properly evaluate forest land management we must recognize what the land is being managed for; this includes timber production as well as all other forest land uses such as beauty, parkland, hunting, fishing, camping, watershed protection, boating, picnicking, swimming, and any number of preferences inspired by individualistic viewpoints. Perhaps we would do well to give more recognition to the fact that the small owner's forest land is so often in poor condition because he has contributed so heavily to the nation's timber supply in the past and is continuing to do so.

TVA

1956. Pride of ownership, interest in a family estate, and additional security appeared to be the underlying motives for better management; properties owned primarily because of their woodlands were not much better managed than those where woods were of secondary importance.

TVA

1969. 20% of owners give top priority to timber production; only one percent oppose timber harvesting; the overwhelming majority recognize the value of wood as an industrial raw material.

Texas

1953. Owners who intended to grow timber as their major use and those whose major intent was in range or pasture use were not greatly different in quality of timber management practiced; many owners with major intent in range or pasture use were found to consider timber growing as a secondary intent.

Texas

1960. 16% of owners have major management objective of timber production; many holdings have little or no timber of real commercial value and others have only a small acreage of growing stock; much of area associated with farm holdings and most owners have major management objective of crop farming and pasture use, but many with secondary intent of timber production; 40-50% thus have definite interest in timber production either as their primary or secondary enterprise.

Texas

1967. Nontimber objectives becoming of increasing importance; proportion of present owners with investment or speculation objective double that of previous owners; of those indicating investment as a primary use, over half reported recreation as secondary benefit and made no timber available for sale.

Ind.

1966. Careful evaluation needed of landowner goals and investment and income alternatives before giving advice since high dollar returns and high rates of return on investment may not be compatible.

Iowa

1967. Most important benefits owners receive from their woodlands, with range related to poor or good wood markets, were pasture (25-50%), wood for home use (10-30%), erosion control (?), cash income from sale of wood products (0-20%), and recreation (less than 10%).



Mass.

1965.

Owners consider personal recreation and residential use most important reasons for owning woodland; 34% said timber production was one of their uses; 45% of owners expect to sell forest products in next 5 years and 40% are undecided.

42% of owners would leave as much woodland as possible uncut and an additional 21% would leave some; when comparing this "preservationist" group with other owners (nonpreservationists) the former have a higher proportion of better educated, higher paid business, executive, professional types, and a considerably greater representation of persons who are summer residents on the land; 85% of preservationists believe that forest cutting practices which remove mature trees are either acceptable (31%) or would be if properly supervised (54%); fear of impairing esthetic value of forest a major factor in thinking of this class of owners--47%; while 31% expressed disinterest in selling forest products, only 16% were opposed to cutting in woodland areas; can be assumed that about 10% of owners are "hard-core" preservationists.

Mich.

1958.

Among SCD cooperators with woodlands, 7% thought woodland had an important place in the farm plan, 97% thought it had a minor or insignificant place.

So. Mich.

1962.

Although the majority of owners had only an elementary grasp of forest management, 52% said forest products were main objectives for retaining their woodland; urban expansion will continue indefinitely to usurp forest land in this area; poor cutting practices are probably a more critical feature of forest management than urbanization.

Mich. UP

1962.

Considerable variation; prominent ones include: ownership to provide residence, hunting or fishing use, general farm use, inactive, and a site for summer home or weekend cottage; only 6% of owners gave timber production and timber values as primary ownership objective; among UP owners residence and general farm use were the two most prominent reasons, while among absentees hunting or fishing and summer home use most often cited.

Mich.

1964.

Prevalence of poor cutting practices and lack of interest in timber stand improvement and tree planting reflect owner's lack of concern for the productivity of their forest land; this indifference a manifestation of many complex, inter-related factors such as infrequent and often trifling

incomes from the forest, long-term process of timber production, limited planning horizons, more lucrative alternative uses for time and money, and limited concepts of forest management; only 3% of owners making conscious effort to grow timber for sale or use; 32% hold land for farm, pasture, and home use; 18% for recreation and residence; 16% for liquidation of timber; because of the psychic values associated with landownership, forest land has become a consumption as well as a production good; objectives of ownership are sometimes incompatible with timber harvesting.

Mich. UP  
1969.

25% of owners holding 36% of acreage gave reasons for owning forest land as investment, for sale, or inactive; 33% with 21% of acreage gave objectives that were recreation oriented; 21% with 13% of acreage reside on their properties; 12% with 11% of acreage indicated farm use; 9% with 21% of acreage said production of timber for sale was primary objective.

Timber on most lands held by owners in Upper Michigan who report no timber producing objectives will find its way to the market; although "X" percent of owners give timber production as a major objective, this has been construed by some to mean that this percent of owners are timber production oriented all the time; would be just as sound to conclude that all small owners have timber production objectives "X" percent of the time.

Many owners have nontimber producing objectives most of the time, but during the short period when their timber is merchantable, they are timber-value oriented; thus, the small forest owners as a group will tend to dispose of merchantable timber in a regular and largely predictable manner, but due to minimal investments in timber stand improvement at a rate well below the potential of the sites.

Missouri  
1964.

20% of owners had no specific reason for keeping or using their forest land, 15% said they intended to grow timber, 11% considered it as residence and the timbered area incidental to ownership, more than a dozen different reasons given by the balance.

Declared intent to grow timber evaluated against past actions taken by the owner and little evidence was revealed that they really meant it.

Ohio

1961. In hill counties 76% of owners holding land primarily for timber growing compared to 25% in corn belt counties where 49% held for grazing; timber growing does not always mean that owner is actively managing his forest; many feel they are growing timber when their forest land is not devoted to another use; "growing timber" seems to mean letting nature take its course.

S.E. Ohio

1965. Timber production, at best, is regarded as a secondary venture and woodland owners depend primarily on other enterprises in their quest for income and profit; of all owners interviewed, 37% indicated timber growing for home use was primary objective, 35% said timber growing for sale, and 9% said investment was objective in owning woodland; numerous other reasons by the balance; when asked to indicate a second alternative objective in holding their woodland, 75% of owners have the same three objectives.

Much of the conventional economic theory assumes a profit maximization goal as the reason for woodland ownership, but farmer behavior and attitude are affected by the extent of their experience and customary behavior; the effort to change owner behavior and attitude is therefore a basic communication problem.

W. Va.

1966. Woodland owners presumably have several ownership objectives; wildlife is most frequently-mentioned objective; direct use of timber products, livestock pasturage, and protective aspects of forest cover objectives for about 1 of every 2 owners; only 25% considered sale of timber products an objective; of the 75% who did not the most common reasons were that timber was being held to meet unexpected contingencies, that past cutting had so depleted the stand that no merchantable timber was available, and that current prices were too low; rarely only one reason explaining lack of commercial objective but rather various combinations of reasons given; of the 25% who sold timber, 72% did so to meet current expenses such as tax payments, working capital, or emergency money needs.

Wis.

1959. 50% of owners indicated timber growing as primary intent of use; most probably intend the timber for home-use products; vast majority of woodland earmarked for timber growing has seen little application of principles of forestry; only 24% of owners had ever sold timber from their land contrasted with the 64% who had harvested timber, the difference being due to those who cut for home-use purposes.

New Eng.

1950. Proportions giving timber values as reason for owning forest: owners of wood-using plant--100%, full-time farmers--65%, business-professional and laborer-clerical groups--50%, all others--33%; fact that owners of more than 75% of forest acreage have major occupational interests that do not require use of their forest land for timber production may explain the lack of concern about the management of small woodlands; majority of these people look elsewhere for their principal source of livelihood.

East

1961. Majority of owners claimed timber growing as intended use for their forest land; however, interviewers felt that the term "timber growing" was not properly understood by owners as a deliberate activity; no doubt many who professed such a use were doing nothing to their woods; intended use strongly influenced by prevailing conditions such as lack of market for timber products, deteriorated stands, low-production sites, or a competing livestock industry.

9--ATTITUDE AND INTEREST IN FORESTRY AS AN INVESTMENT

Ark.-La.-Miss.

1945. Negative attitude to forest management due to (1) not competent to conduct forestry practices - 36%; (2) unable to spare time - 35%; (3) not interested in forest land - 21%; (4) believe woods need no care - 5%; and (5) trespass, fires, or other costs too high - 3%.

Arkansas

1959. Major reasons owners did not utilize professional forestry services were (1) feels he does not have enough land or timber, and (2) not interested in forestry--60% of all owners; insurance, credit, and taxation are not major problems for small-tract owner regarding timber management.

Arkansas Ozarks

1964. Although little intensive forestry practiced 82% considered their woodland to be of benefit; due in part to multiple-use values placed on woodland such as recreation, grazing, watershed protection, and production of timber for home use.

Reasons for not using better woodland practices: (1) owner's time and money more profitable elsewhere - 22%, (2) lack of know-how - 20%, (3) hope to clear woodland for pasture or crops - 17%, (4) cost of practice greater than income - 10%, (5) too much time needed to grow crop and receive income - 9%.

Louisiana

1959. Reasons given for not practicing forestry were (1) has better use for the land - 25%, (2) lacks understanding of forestry alternative - 19%, (3) emergency money needs - 19%, (4) interested but has not yet taken initiative - 11%, and (5) all other - 26%.

Louisiana

1963. Adopters of forest practices were more likely than non-adopters to perceive benefits derived from their woodlands.

North Carolina

1963. 63% thought ownership carries with it an obligation to indulge in some land use practices that are not clearly to their personal economic benefit; 3% thought ownership involved no responsibility to society; opinions did not vary with size of property.

North Carolina

1964. Nonindustrial forest owners a heterogeneous lot with a multiplicity of reasons inhibiting their practice of forestry; probably most serious is the low asset or low income position of the average owner; second is his lack of entrepreneurial ability and, to a lesser extent, his deficiency of knowledge about forest investment prospects and how to begin practicing forestry; finally is fact that most small forest properties are uneconomic in size, both from standpoint of efficiency and potential magnitude of their contribution to owner's income; well over half the owners do little more than attempt to exclude fire and grazing and about 40% make any effort to improve their forest through harvesting practices; 27% of owners had timber cut in order to meet pressing financial obligations; about 22% sold timber with definite silvicultural objectives in mind.

Tennessee Valley Authority

1956. Those who attempted better woods management before the case record was begun did a better job of following recommendations than those with no prior interest.

Tennessee Valley Authority

1969. Between 1960 and 1968, the proportion of private forest under good to excellent management went from 12 to 18 percent, and owners of 26% of the forest reported they had sought assistance from a professional forester; on about 3% of the forest, owners have done some kind of stand improvement other than that associated with timber harvesting or tree planting. About 60% of owners primarily interested in things other than income; a simple pride of ownership is the thing that gives forest owners the most satisfaction; almost 50% also believe that timber growing can be a profitable business.

Texas

1953. Prevailing practice on small ownerships is to cut all merchantable timber recurrently as young timber stands reach merchantable size and volume with result that stands are not only kept in a state of low productivity, but ~~eventually~~ deteriorate to worthless cull trees and brush; major limitations to good timber management due to lack of control in stumpage sales and the financial problems of owners.

Texas

1956. Owners must be induced to practice forestry while they still have pine timber to work with; once their woodlands have reduced to a sea of worthless hardwood brush, most owners shrink from the long waiting period necessary to rebuild desirable growing stock.

Texas

1967. Comparing present with previous owners: 36% of present attached primary or secondary importance to the use of forest land for timber production compared to 68% of previous; increasing pressures for alternative uses (e.g., real estate value, water impoundments) cause intended use of forest acres for timber production to be forced aside.

Most frequently stated reasons given by present owners for not making timber available for sale were: (1) timber cutting not worth the time and trouble, (2) benefits of timber production not compatible with owner's other land objectives, (3) antagonism towards wood harvesting methods, (4) timber management would not be profitable on their woodland.

South

1959. Some of more important reasons for general apathy toward forestry of the intermediate and some of the large land-owners: Still consider forest land a semi-liquid asset for financing emergency condition; lack of knowledge regarding income opportunities because most farm people or managers have not considered forestry a part of the primary resource base of farm when considering resource changes; high alternative earning rates caused by limited amount of capital that has more favorable investment opportunities on farms in enterprises other than forestry.

Indiana

1966. Owners of managed woodlands, when compared with a random group of woodland owners, were found to have a greater degree of interest in forestry and woodland management, to have more education and higher incomes, and to exhibit a greater tendency to be "early innovators" than the general population of woodland owners; investment per acre negatively related to internal rate of return but positively related to dollar returns per acre per year; this may explain actions of land-owners with limited capital who liquidate timber capital and maintain their woodlands in a physical condition conducive to a high rate of return on a limited capital base; average net rate of return on managed woodlands 4.9%.

Iowa

1967. 40-70% thought their forest contained salable timber--range related to poor and good market conditions; in good market area 50% interested in marketing, 40% in TSI, 30% in planting, and 20% in obtaining management plans; in poor market area less than 10% interested in any forest practice; lack of interest due to better investment opportunities, desire to continue grazing their forests, and poor experience with past timber sales; very few regarded lack of technical knowledge,

desire to keep woods wild, lack of clear ownership, or taxes as the major deterrent to adopting more intensive forestry practices.

#### Massachusetts

1965. A majority of owners in each age, education, and income class believe that cutting practices acceptable or would be if controlled by a forester; cutting of forest trees is in general not unfavorably regarded if practices are conservative in nature; reasons given for not selling forest products were (1) had too few merchantable trees - 56%, (2) ignorance of such matters - 25%, and (3) fear of destroying forest, its beauty, and usefulness - 34%; whether timber from a tract can be purchased depends upon many factors such as owner's need for income, price offered, reputation of buyer, purchaser's buying approach, proposed method of cutting, and owner's attitude toward such matters..

#### Southern Michigan

1962. Timber production plays minor role in economy of study area; 82% of owners had inadequate concept of forest management; most of the timber products grew in spite of, rather than because of, the owner's efforts; only 5% of owners had carried out any woodland improvement; however, 76% indicated that they could improve their forest management; 41% of these owners indicated a lack of interest in forestry as their main reason for not improving their woodland management, while 31% said they had more rewarding activities claiming their time and effort.

#### Michigan UP

1962. Only 13% of owners who owned open land suitable for planting had made reforestation-type plantings; excluding planting and harvesting, few owners had done any other work in their woodlands; when queried why, more than half said they simply hadn't thought much about it while another third indicated that their interest in holding the land did not specifically include the physical condition of the timber; apparently there is no simple relationship between a class of owners or ownerships and their performance of forestry practices or ~~attitudas~~ attitudes toward such practices; most of the properties are relatively small and support second-growth tree stocking; the investment potential at this time is not high.

#### Michigan

1964. Some owners liquidate their growing stock prior to selling property and many new owners acquire nonstocked or poorly stocked land and will never see the day when their forest supports enough merchantable growing stock to attract timber



buyers; high incidence of fair to poor cutting practices generally stems from owner's desire to liquidate all merchantable timber; in both UP and southern half of LP about 5% of respondents indicated they had conducted woodland improvement practices; tree planting much more popular than TSI; 20% planted in southern half of LP and 7% in UP; many owners did not plant their trees for timber production purposes.

#### Michigan UP

1969. Major reasons why some owners did not sell timber: woodland immature and contains little or no salable timber (39%) and for aesthetic or sentimental reasons (15%); balance was for numerous miscellaneous reasons; 63% of all owners indicated that they had land suitable for tree planting and 17% of these had planted; less than 5% of all owners planted trees for timber production; about 10% of all owners had done some TSI; 11% of all owners had done a variety of activities including fencing, plowing fire lanes, brush control, drainage, and cutting culls for firewood.

Timber selling was most common activity (33% of resident owners) as more owners disinvested rather than invested in their timber; as these practices were carried out over a seven-year period and only on part of each property the vast majority of the land was unmanaged at least until the timber values accumulated enough to attract timber buyers.

Timber requires and receives little special care; it is protected from fire by the State; is of minor importance in day-to-day economic decisions of owner; growth accrues gradually year by year, value increasing only a dollar or two per acre annually until a stand of merchantable timber results that is worth too much to be ignored; a point is reached when most owners are no longer indifferent to the potential value of a timber harvest, except in cases where timber cutting might obliterate dominant ownership objectives.

#### Missouri

1964. Only 10% of owners reported they were practicing any forestry, but they controlled 40% of the forest land; much of the forestry they practiced was applied unevenly and not all the forest area they owned was being managed; most owners doubt that forestry would pay on their land; 97% had never planted trees and few indicated any interest in doing so.

New Hampshire

1964. Classified and compared woodland owners as innovators or non-innovators on the basis of whether he was any early adopter of new forest management practices; majority of innovators not motivated by a profit desire but rather by the pleasure they derive from owning and managing a woodlot; a noninnovator is primarily concerned with the income he can get out of the land without feeling the necessity of putting anything into it; for both groups the two most important reasons given (about 55% of all owners) for not using better management practices were (1) more rewarding activities claim owner's time and money, and (2) long time to grow crop and get income.

Ohio

1961. Many farmers in Corn Belt claim they do not convert woods to farmland because conversion costs more than buying additional farmland; none of the owners could estimate the value of his timber; however, there was a positive correlation between owner's declared intent to use land to grow timber and value of the stands; owners in the hill region are interested in forestry probably due to active wood-using market; owners in Corn Belt not interested in forestry since they have other uses for land and are under economic pressure to increase efficiency of their farming operations.

Southeast Ohio

1965. Significant positive relationship between owners classed as agricultural innovators and the adoption of both voluntary and cost-sharing management practices; the only restriction in value of this owner characteristic lies in limited number of owners who can be labeled as innovators; compared to non-innovators, innovators had higher levels of participation in all management practices.

Reluctance on part of owners to adoption of timber management practices is directly related to obstacles which confront them; 50% of owners indicated that more rewarding activities and lack of time were obstacles; other important reasons were lack of technical knowledge and too long to grow a crop; same four obstacles were named as secondary reasons for lack of forest management.

Typical woodland owner most likely to adopt timber management practices would be an ACP participant, an innovator in general agricultural activities, under 50 years of age, who has 100 or more acres of woodland, received a woodland income during the past five years of \$2.00 or more per acre per year, an educational level of high school graduation or above and a gross annual income of \$10,000 or more.

Pennsylvania

1969. Hunting and fishing first interest in woodland - 27%, no special interest - 19%, for selling timber products - 13%, home use timber products - 13%; 52% had cut some timber and sold it while 34% had never cut timber; major reasons for harvesting timber were to remove mature trees, provide wood products for own use, and to meet various expenses; practicing better forest management mentioned by several but only as a second or third reason; among those who had not cut timber the major reasons were trees too small, hadn't owned property long enough, and opposed to any form of cutting; when all owners asked if they would be willing to harvest timber, 79% said yes and 21% said no; major reason for cutting timber to remove mature trees and economic reasons of meeting expenses as well as providing wood products for own use; all owners were rated by degree of interest in woodland management--31% high, 34% medium, and 35% low.

West Virginia

1966. 82% had not carried out any form of stand improvement; about 75% of these gave lack of sufficient time and 25% gave lack of interest as reason; of those who did stand improvement work, half stated it was incidental to fuelwood harvesting; 45% considered such activity as stand improvement to be a good investment.

25% of owners had planted trees with most common reasons erosion control, aesthetic or sentimental, Christmas tree business, and game cover; of the 75% who had not planted, 3 out of 5 indicated lack of interest as reason for not doing so.

Wisconsin

1959. Out of 180 people 4 had tried to borrow money on their woodland and 1 had tried to insure his timber; none had leased his forest land to someone else for forest management; 8% exhibited some interest in long-term leasing; low timber values and small acreages were evidently factors in disinterest in forestry in many cases.

New England

1950. Forester who thinks of landowner interest purely in terms of profit and loss must qualify this concept materially with respect to small forest holdings in New England; the complexity of the motives for owning land make it impracticable to classify either the owners or the forest acreage in mutually exclusive categories; many owners feel that they have two or more equally important reasons for holding properties; the fact that less than half the owners list timber values as a

reason for holding land means that land in rural New England has, to a notable extent, become a consumer's good; this poses some real problems for those who feel that such lands should make their due contribution to the commercial production of timber; problem somewhat mitigated by fact that larger holding more likely to be in hands of those who are interested in timber values; is clear that many owners hold property long time without income, yet only 20% say it is a financial liability; another 20% gave no indication about financial status; possible that many felt that question of whether the property is a financial asset or liability was not of primary importance to them.

East

1961. Two-thirds of owners acquired timberlands by purchase and most of the others through inheritance; forest lands usually obtained as part of a deal involving other lands valued for pasture or annual crops; except where timber speculation was being considered, nonindustrial owners seldom looked upon forest land as a separate entity with a sustained income-producing capacity; except on the better pine sites in the South, few owners have a life expectancy which would exceed a pulpwood rotation; financial incentive to plant must come from an expected higher sales or estate value for land with an established stand as compared to land with a severely understocked or nonexistent stand.

The percentage of owners who believed forestry practices would be profitable was larger than the percentage who had taken action; there was a wide variety of motivations which may influence forest landowners' attitudes toward forestry.

East

1965. Although 90% of owners said their woodland was of some benefit, there did not seem to be a strong desire to make use of better woodland management practices; did not seem to offer sufficient satisfactions; limiting factors were: ~~owner~~ occupied with activities which gave greater satisfactions and higher net return, cost of practices outweighs possible benefits, too long a time to grow timber and get income from it, and lack of technical knowledge.

Generally speaking, owners value their woodland but are not willing to put more time and money into using better woodland management practices; if the cost of practices is too high, owner can forego these practices and still get value out of their woodland; anticipation of income high among the benefits expected whether or not owner improved woodlands; owners classed as innovators gave reasons for not using better practices which were about the same as those of non-innovators.

10--EXPERIENCE AND KNOWLEDGE IN FORESTRY

Ark.

1959. On many tracts nothing short of full professional management appears likely to succeed in bringing small-owner tracts up to desirable level of timber production; no single panacea will serve.

Ark. Ozarks

1964. 86% had not talked with anyone during past year about management of woodland; 86% relied on timber buyer or sawmill operator for market and price information; 71% had little or no interest in market news type information; 40% planned to carry out forestry practices in future without Government payment; 30% had tried practice of killing undesirable trees; 10% had tried planting seedlings in old fields; 4% had tried planting to reforest; 11% had tried marking trees.

Georgia-N.C.

1960. Those persons most likely to be practicing forestry are those who sold timber recently.

N.C.

1963. About 40%, controlling 60% of nonindustrially-owned forest land, understood only the most rudimentary concepts of forestry; the balance lacked this knowledge.

N.C.

1964. 73% of owners making timber sales did so with little apparent control (lump sum or buyer's choice) while another 19% made under controls which may be assumed of dubious quality; 76% of owners failed during their tenure of ownerships to institute any deliberate type of forestry practice; 77% of owners who have engaged in forest practice have instituted only one forest practice (mostly planting); less than 4% effected three or more; 40% of the owners controlling 60% of the forest understood only the most rudimentary of forestry concepts.

N.C.

1968. Among owners who had, at some time, adopted a forest practice the proportions were planting 70%, site preparation 15%, timber marking 38%, thinning 37%, improvement cutting 23%, pruning 15%, plowing firebreaks 29%, and fencing 7%; 60% of all owners had adopted more than one practice.

TVA

1956. Owner participation in field work apparently did not increase the chances for successful management; the better managers customarily sought and used technical assistance in all their affairs--not only in forestry matters.

Texas

1953. Percent of woodland owners practicing fair or better timber management - 28%, fair or better cutting practices - 15%, hardwood control - 11%, interplanting - 1%, fire protection - 78%, grazing control - 49%, low degree of application of practices of marking, supervision and written sale agreements, which are necessary to good cutting control, major reason for the poor quality of cutting practice and low timber productivity--due largely to lack of sufficient interest by the owner and to pressure to sell which was found quite intense in some areas; more than half the owners who believed their management to be good to excellent found to be poor managers--wide variation in concepts indicates that many owners do not know what are good management practices, or else that there are no prevalent standards in the viewpoints of the owners.

Texas

1956. Owners who undertook forest management did not do so until professional foresters encouraged them to do so; nearly all of them have received continuous assistance from public or private foresters.

Mass.

1965. 55% of owners had undertaken at least one forest management activity during their period of ownership; most apply these practices on only a small part of their total holdings; 45% have never undertaken any management activity; 70% had never sought professional assistance from a forester, but of those who had 97% considered this help to be beneficial.

So. Mich.

1962. 55% of those who sold timber products admitted that they had no basis for determining the reasonableness of the prices received; only 9% of all timber sellers received more than one bid further indicates their poor bargaining position.

Mich. UP

1962. 24% of all owners sold timber from their property within the last 5 years; among owners who had not sold timber the most prominent reason cited was insufficient merchantable material.

Mich.

1964. Only 4% of owners do any timber marketing during a given year; more than half the owners had never sold timber products at all; most common reason is that owner does not think he has any merchantable timber; 67% of those who harvested timber sold stumpage rather than do their own logging; only 9% of owners who did not do their own logging supervised the operation; in the northern zones, market and price information can

be readily obtained; 89% of sellers in this zone feel that sources are quite adequate; in southern Michigan 55% of owners who sold timber had no real basis for judging reasonableness of prices received; 47% expressed interest in a public timber price and market information service.

Mich. UP

1969. 27% of owners interviewed said they had sold stumpage or cut products between 1960 and 1967.

Missouri

1964. Only 11% of owners had ever consulted a forester for advice in managing their woodlands; major reason among those who had not was indifference to the resource and its value.

Ohio

1961. Very few owners use services of a technical forester, but most of those who had were satisfied and would use again; 39% of owners in hill counties had performed some management practice and 19% in Corn Belt.

Pennsylvania

1969. About two out of three owners had cut timber for sale or home use; only a small proportion had applied forestry practices; in general, owners carry out specific forestry practices rather than a comprehensive plan; people are basically unaware of forest management terminology; hence, there is a problem of effective communications between professional foresters and woodland owners; timber resource in study area not being properly managed from an economic point of view; owners evidently know very little about the marketing opportunities.

Wisconsin

1959. 75% of owners had applied no forestry practices on any of their holdings; practices applied were almost entirely planting; in spite of the opportunity for TSI in this area, only 3% of owners had done any.

East

1961. Even though a majority of owners claimed timber-growing as intended use of their forest land, only about a third had carried out any type of forestry practice; planting was most widely-used practice and much of this was done on old fields rather than in cutover or understocked stands; less than an average 15% of all owners had ever used any other forestry practice such as stand improvement, regeneration cutting, plowing fire lanes, fencing out stock, etc.; this strengthens belief that many owners do not fully appreciate what timber-growing involves or lack resources for more than negligible

management; 75% of owners had never planted with major reason being they lacked what they considered a plantable area as well as lack of time.

East

1965. Comparing innovators of agricultural practices with non-innovators (both groups woodland owners) the former had used more management practices and were more interested in a woodland management plan.

11--PARTICIPATION IN FORESTRY PROGRAMS

Arkansas

1959. 84% of the landowners who had improved their stands and 60% of those who had planted received government payments for their efforts.

Ark. Ozarks

1964. Relatively more interest was shown in the arrangement whereby the government would provide a forester free of charge; 70% of all owners reported they were acquainted with ASCS program, but less than 10% had availed themselves of cost-sharing practices; neither credit nor taxes was a factor in owners' decision to practice forestry.

Mississippi

- 1961 Y-LT Project. Half of the owners had cooperated with SCD in drawing up plans for their tracts; half of these had received ACP payments; half of owners in top income group received payments contrasted to one-seventh in lowest group; more low-income owners would probably have participated if they could have paid their share of the costs in labor; cotton, cattle, and dairy farmers were least common users of forestry assistance while almost half the owners of nonfarm tracts had been helped.

N. C.

1964. 56% of owners selling timber realized CFM marking services were available but failed to take advantage of it; primary reason given was they did not think they would gain sufficiently from it; 31% did not even realize marking services were available; on learning about it, only about a third of the newly-informed owners appeared sufficiently interested to be likely to seek such a service on the occasion of their next timber sale; 16% of owners totally unacquainted with possibility of obtaining cost-sharing payments; 76% never



got around to applying for payments; most not immediately eligible because they had effected no approved forestry practices; only 7% of owners potentially eligible for payments actually indicated they had collected; among those who received payments, two-thirds said they could never have undertaken the work without such financial help; 79% of owners not at all interested in management leases and another 18% only mildly interested; major reason was fear of losing decision making rights.

N. C.

1965. Participants in CFM, ACP, and SCD programs were 4.3, 2.7, and 4.7 percent, respectively, of all forest landowners; no discussion on why participation rates were so low.

N. C.

1968. Considering only owners who had adopted forestry practices; 40% who planted received direct monetary help through ACP or Soil Bank (1/3 from ACP and 2/3 from Soil Bank); CFM foresters had a minor role in interesting owners in planting but a major one in interesting them in thinning; nearly 40% of owners who practiced forestry had attended a forestry demonstration, usually conducted by the State Extension Service; of the many ways owners came into contact with forestry ideas, the most prevalent were mass media.

TVA

1956. In every case where the owner employed a private consulting forester, management practices were found to be satisfactory; most owners became interested in forestry through personal contact with public agency representatives rather than through neighbors, books, pamphlets, magazines, or other sources; they responded to encouragement and periodic technical help from foresters; those contacted most often through the years did the best work; management was satisfactory in every case where agricultural extension workers continued to provide guidance after the demonstration was set up.

Texas

1953. Proportions of owners who participated in various programs: tree farm system membership - 4%, SCD cooperator - 16%, technical assistance from one or more agencies - 25%, ACP - 5%, visited demonstration forest - 20%; received information on forest management - 62%; close relation between management quality practiced by owners and their participation in programs of cooperation, assistance and education which involves direct contacts--a particularly high proportion of Tree Farmers and ACP participants rated at least good in timber management.

Texas

1956. Forestry programs can most fruitfully be directed toward owners with better than average assets, acreage, and timber growing stock; however, after at least 25 years of forestry promotion, small landowners are still in the beginning stages of forest management.

Iowa

1967. 60% aware of availability of ACP; 10-30% of property-tax advantage under Iowa Forest Preserve Law; 40-70% of professional forestry services available through district forestry of Conservation Commission; no data on rate of participation; 10-50% interested in obtaining services of district forester; 10-25% in joining marketing coop; 10-60% thought price and outlook information would be useful.

Massachusetts

1965. 27% had no knowledge of many forestry services available and 46% had made no use of them; it is probable that both percentages considerably underestimate the true situation; was observed that public assistance programs are more widely known and more frequently employed than are private consultants and foundations which charge a fee; most common reasons given for not making use of services were (1) no knowledge of service, (2) woodland too small to bother with, and (3) not in position to make use of services; few owners had any reasonable knowledge of what such assistance entailed.

Michigan

1958. When measuring the forestry impact of Extension, ACP, and SCD programs on small forest landowners one is impressed both by the limited extent of the efforts made and the limited effects; existence of Forest Extension program was unknown to 82% of the forest landowners, 97% knew nothing about service forestry program, 90% of the farmers unaware that payments for forestry practices available under ACP; most of those who did not know about ACP did not indicate any interest in forestry payments; more than one-half the farm forest land held by farmers who had become SCD co-operators, but only 7% thought woodland had an important place in the farm plan.

So. Michigan

1962. Most owners showed little or no interest in the assistance programs; most had had no contact with such programs in the past; although two-thirds of owners were familiar with ACP and 30% had received some nonforestry cost-share aid, only 4% had requested ACP forestry assistance; 10% of owners had received or plan to apply for CFM assistance; most of the

owners who had sought CFM aid did so at a time when they were negotiating sale of stumpage; 60% of CFM program participants practiced good cutting while only 13% of non-participants did so.

Michigan UP

1962. Over 60% of owners did not know that there were public programs which would provide landowner with on-the-ground advice concerning his forestry problems; of those who indicated some awareness that such services could be obtained, only a minority could name a specific source of such help; about one-eighth of owners at some time have had professional forester examine their properties and most of this help was to provide advice on planting; of those owners considered eligible for ACP payments, more than half had never heard of ACP; among owners who did know of payments, about one-sixth at some time had applied for and received payments for planting while the remaining third was for TSI; practically no participation in Tree Farm Program.

Michigan

1964. Generally speaking, participation in forestry assistance programs has been minimal and varied somewhat depending upon the program and area of the State; owners of 5-10% of small private forest land had received ACP forestry cost shares; about same proportion received CFM aid.

Michigan UP

1969. If owners of most small forest tracts are interested in timber production only for the short period when the timber is harvestable, assistance programs ought to be more effective if geared to the period immediately proceeding and during timber harvesting.

Missouri

1964. Most managed forest land is under the Missouri Conservation Commission Forest Crop Law which provides for a deferred-yield tax in lieu of an annual ad valorem tax for owners agreeing to manage their timber under the guidance of State Forestry personnel; 25% of owners unaware of ACP although a full-scale program is established in the area and 58% were indifferent to it; not one owner interviewed had participated in ACP; 67% of owners who did not manage their forests stated they would not be interested in having their property managed for them if management-lease services were available.

New York

1959. Acreage of forest-land owned and assessed value of owner's property were the only variables positively correlated with response to public programs offering assistance to landowners

in planting and in doing stand improvement work; occupation of owner, age of owner, method by which forest property acquired; years owned, distance of forest property from owner's residence, and timber value per acre not correlated with response.

Ohio

1961. 96% in Corn Belt and 78% in hill counties were aware they could obtain assistance to plant trees; none in either area had participated in cost sharing of ACP.

S.E. Ohio

1965. Significant positive relationship between woodland owners who participated in ACP and the adoption of both voluntary and cost-sharing management practices; 75% of agricultural innovators received technical forestry assistance compared to less than half of noninnovators.

Ohio

1967. According to Conservation Needs Inventory in the Hill Country, the annual timber-culture achievement of ACP represents 0.2% of the need and the annual tree-planting rate represents 0.4% of the need; on the average, 1.7% of the forest-landowners participated annually in forestry practices of ACP--65% in planting and 35% in timber-culture practices.

Pennsylvania

1969. State service forester seen as the primary person to whom owners would turn for help in harvesting or selling their timber; but only 8% said they knew considerable about the service forester and 42% were not aware of him; considerable turnover in service foresters in this area; it is evident that owners are generally ill-informed about assistance available and sources of assistance.

West Virginia

1966. 31% of all owners reported participation in ACP or Soil Bank; most who had obtained benefits were farmers for purchase of lime and fertilizer for cropland improvement; only 1% of owners reported receipt of subsidy for TSI and 3% for planting; more than two-thirds of owners had never contacted professional foresters and about 60% were not aware that forestry services were available from various public agencies; of those who knew services were available, 95% said they had not utilized the service mainly because they had "never got around to it."

Wisconsin

1959. Only 1 of 180 owners had taken advantage of the ACP payments for TSI; 8% had planted trees under ACP; of those who had not obtained payments most (24%) said they were not interested in forestry, 17% did not know about the payments, and 16% indicated that they did not have time for practices; only 9% had availed themselves of foresters' services.

New England

1950. Public programs have, thus far, been designed chiefly to meet needs of the farmer and the timber operator who hold only about 35% of total acreage in small properties; it thus appears that the major effort to encourage better forestry has been concentrated on about one-third of the target.

East

1961. About 15% of all owners interviewed had used professional forestry services on their properties; most important single reason given was that the owner was not interested; other reasons were that owner unaware services were available or that owner had sufficient knowledge of forestry; about 10% of all owners had ever obtained ACP payments; reasons given for not having done so were: not interested in forestry, unaware the payments were available, lack of time to do work required, unsympathetic to program, and too much red tape involved in making application.

East

1965. Innovators and early adopters of agricultural practices compared to noninnovators (both groups woodland owners) were more acquainted and had participated more in ACP.

APPENDIX II - LITERATURE CITED

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